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10/509,664	09/29/2004	Harald Buchmann	17782	8353

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EXAMINER

HUNNINGS, TRAVIS R

ART UNIT	PAPER NUMBER
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2612

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/509,664	Applicant(s) BUCHMANN, HARALD	
	Examiner Travis R. Hunnings	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-4, 8, 9, 12, 13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghaffari et al. (Ghaffari; US Patent 5,708,423) in view of Irizarry et al. (Irizarry; US Patent 6,195,009) and further in view of Lucero et al. (Lucero; US Patent 4,072,930).

Regarding claim 1, Ghaffari discloses *Zone-Based Asset Tracking And Control System* that has the following claimed limitations:

The claimed definition of access-controlled areas in a factory into which defined objects are not intended to enter, attachment of a transponder to a container, the transponder carrying information with respect to the contents of the container, provision of base stations in the access-controlled areas is met by the asset tracking and control system of Ghaffari that maintains the locations of objects having transponders attached to them using portal antennas which control which zones the objects may be moved into/out of (column 1, lines 50-58);

The claimed detection by the base station if a container is approaching an access-controlled area into which the contents of the container are not intended to

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enter, and indication of the non-permitted approach of a container is met by the reader taking action to prohibit the moving of the object when it is detected to be moving into an unauthorized area (column 17, lines 10-38).

Ghaffari does not specifically disclose the claimed indication of a warning signal on the container. Irizarry discloses *Child Monitoring Device Adapted For Use With An Electronic Surveillance System* that teaches using a transponder that sounds an alarm when the transponder approaches an area it is not supposed to enter (column 4, lines 20-34). Adding an alarm to the transponder on the object of Ghaffari would increase the awareness of the detected object being taken to an unauthorized area and would better alert the user to the problem. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Ghaffari according to the teachings of Irizarry to have an indication of a warning on the container.

Ghaffari and Irizarry do not specifically disclose the claimed display for indicating data received from the central control system on the container. Lucero discloses *Monitoring System For Use With Amusement Game Devices* that teaches using a transponder with a display that displays information received from a reader on the display (column 4, lines 9-31). Adding a display to Ghaffari and Irizarry would give the device the ability to display information to the user and therefore make it more useful by providing this extra information. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Ghaffari and Irizarry according to the teachings of Lucero to include a display on the transponder.

Regarding claim 2, Ghaffari does not specifically disclose the claimed access-controlled area is a machine to which containers are supplied. Ghaffari does teach the access-control system being used in a building that requires the use of zone control (column 1, lines 50-58). It would have been obvious to one of ordinary skill in the art to use the zone control in any type of building including one where containers are supplied to machines in order to prevent items being taken to the wrong location and waste time or cause damage.

Regarding claim 3, the claimed indication is a warning signal on the container is met by the alarm sounded on the tag itself (Irizarry: column 3, lines 56-67).

Regarding claim 4, the claimed detection of an activation signal of a base station by a transponder attached to a container, transmission of an identification from the activated transponder to the base station, and emission of a warning signal at the base station if the identification indicates a container which is non-permitted for the area associated with the base station is met by the reader detecting a response from the transponder and determining that it is not allowed to enter the particular area it is moving towards and then initiating an alarm to alert the user that the object is not allowed to enter (column 17, lines 10-38).

Regarding claim 8, the claimed base station actualizes data stored in the transponder in a wireless manner is met by the device operating as described (column 17, lines 10-38) and using antennas to detect transponders (column 6, lines 27-57).

Regarding claim 9, Ghaffari does not specifically disclose the claimed data stored in the transponder being indicated directly on the associated container. Ghaffari teaches transponders being attached to items to keep track of the location of specific items, therefore the item's description would be indicated by the particular transponder and it would have been obvious to one of ordinary skill in the art that containers or objects often contain identifying marks on the outside for quick and easy determination of what the object is. Therefore it would have been obvious to one of ordinary skill in the art that the transponder would store the same data that would be indicated directly on the container for easier recognition.

Regarding claim 12, Ghaffari does not specifically disclose the claimed container being a FOUP. Ghaffari teaches transponders being attached to objects (column 1, lines 50-58) and it would have been obvious to one of ordinary skill in the art to attach transponders to any object or container including FOUPs in order to make the device as widely usable as possible.

Regarding claim 13, the claimed base stations being connected to a central control system which implements the processing of the transponder data and the

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localization of the containers is met by the host computer as seen in figure 1 controlling the operation of the system (column 4, lines 58-67).

Regarding claim 15, the claimed operating elements attached to the container, read-out, display and transmission processes can be started is met by the system determining what the object is based on the transponder attached to it (column 17, lines 10-38).

Regarding claim 16, the claimed transponder attached to the containers, base stations which are able to transmit signals to the transponder and to receive signals from the transponder is met by the access control system of Ghaffari having objects with transponders attached to them with portal antennas that communicate with the transponders (column 1, lines 50-58 and column 17, lines 10-38);

The claimed central control system which networks with the base stations and is suitable for processing the data received from the base stations is met by the host computer controlling the operation of the system (column 6, lines 27-57).

Regarding claim 17, Ghaffari does not specifically disclose the claimed system controlling the movement of containers in semiconductor production. Ghaffari teaches transponders being attached to objects in order to control the zone access of those objects in a building (column 1, lines 50-58). It would have been obvious to one of ordinary skill in the art to use the system in any kind of manufacturing or storage

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building including semiconductor production in order to make the device as widely usable as possible.

3. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghaffari in view of Irizarry further in view of Lucero and further in view of Francis et al. (Francis; US Patent 6,600,418).

Regarding claim 5, Ghaffari, Irizarry and Lucero disclose all of the claimed limitations except for the claimed transponder and/or the base station determine the distance between them by means of the strength of a transmitted signal. Francis discloses *Object Tracking And Management System And Method Using Radio-Frequency Identification Tags* that teaches determining the distance between a reader and a tag based on the received signal strength (column 3, lines 41-50). Adding a signal strength distance determining means to Ghaffari, Irizarry and Lucero would allow the device to better determine if an object was approaching the unauthorized area or not. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Ghaffari, Irizarry and Lucero according to the teachings of Francis to determine the distance between the reader and the transponder by the strength of the signal.

Regarding claim 6, Ghaffari, Irizarry, Lucero and Francis disclose all of the claimed limitations except for the claimed different measures being adopted dependent

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upon the determined distance. The examiner takes official notice that it is well known in the art for devices to use signal strength to determine the distance between communicating objects and to only cause an alarm when the signal strength or distance is a certain value. Making the device only cause an alarm when the distance is close enough would lower false alarms and ensure that the object is indeed approaching the unauthorized area and not just passing by. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Ghaffari, Irizarry, Lucero and Francis to adopt different measures based on determined distance.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ghaffari in view of Irizarry further in view of Lucero and further in view of Bradin (US Patent 6,556,997).

Regarding claim 7, Ghaffari, Irizarry, and Lucero disclose all of the claimed limitations except for the claimed different frequencies being used for the signal transmission from the base station to the transponder or vice versa. Bradin discloses *Interference Control Method For RFID Systems* that teaches using different transmission frequencies for a reader to a tag and from the tag to the reader (column 4, lines 20-34). Implementing different frequencies in Ghaffari, Irizarry, and Lucero would allow for easier communications without possible collisions between transmit and receive operations. Therefore it would have been obvious to one of ordinary skill in the

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art at the time of the invention to modify the device disclosed by Ghaffari, Irizarry, and Lucero according to the teachings of Bradin to use different frequencies for the signal transmission from the base station to the transponder or vice versa.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ghaffari in view of Irizarry further in view of Lucero and further in view of Chung et al. (Chung; US Patent 6,703,935).

Regarding claim 10, Ghaffari, Irizarry, and Lucero disclose all of the claimed limitations except for the claimed transponder having at least two antennae which are orientated orthogonally relative to each other, that antenna which detected the highest signal strength during a previous reception of a signal being used for a transmission. Chung discloses *Antenna Arrangement For RFID Smart Tags* that teaches using orthogonal antennas (column 3, lines 22-35). It would have been obvious to use the antenna with the greatest signal strength to do the transmission because that would be the best suited antenna. Ghaffari, Irizarry, and Lucero does not specifically disclose the type of antenna, therefore any known antenna, such as the antenna of Chung, would be able to be used by one of ordinary skill in the art. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Ghaffari, Irizarry, and Lucero in view of Chung to use two orthogonal antennas and the antenna with the highest detected signal strength is used for transmission.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ghaffari in view of Irizarry further in view of Lucero and further in view of Applicant's Admitted Prior Art (AAPA; Specification).

Regarding claim 11, Ghaffari, Irizarry, and Lucero disclose all of the claimed limitations except for the claimed active transponder with passive emergency operation properties. APPA teaches that technologies of this type (passive emergency operation properties) are well known per se from the state of the art (specification, pages 6 and 7). Adding passive emergency operation properties to Ghaffari, Irizarry, and Lucero would increase the usefulness of the device. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Ghaffari, Irizarry, and Lucero according to the teachings of APPA to use passive emergency operation properties.

Response to Arguments

7. Applicant's arguments filed 3 January 2007 have been fully considered but they are not persuasive. Applicant argues the following:

Argument A: The transponder of Ghaffari is not suited to receive and process data in any way.

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Argument B: Irizarry does not have an alarm/indication on the transponder and is not equipped to receive and process data/signals.

Argument C: Lucero is a different field of invention and does not deal with position detection or movement direction.

Responses:

Regarding argument A, Ghaffari does not specifically disclose the ability to receive or process data however the teachings of Irizarry would give one of ordinary skill in the art enough motivation to modify the device to include a transponder/tag that would be able to receive and process data in order to provide a localized alarm on the transponder/tag itself.

Regarding argument B, Irizarry clearly discloses a tag that includes an alarm for sounding an alert when the tag attempts to enter an unauthorized area as disclosed in column 3, lines 56-67. One of ordinary skill in the art would have considered the tag receiving a signal and processing it in order to emit the alarm to meet the claimed limitation of receiving and processing data or signals.

Regarding argument C, In response to applicant's argument that Lucero is nonanalogous art, it has been held that a prior art reference must either be in the field of

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applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. In this case, Lucero was found in a search of relevant art and one of ordinary skill in the art would have realized that while Lucero does not specifically relate to the immediate invention of asset tracking, it does teach a particular embodiment of a transponder.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis R. Hunnings whose telephone number is (571) 272-3118. The examiner can normally be reached on 8:00 am - 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TRH


DANIEL WU
SUPERVISORY PATENT EXAMINER
01/19/07